

Claims

1. A conveyor which includes: a pair of spaced parallel drive means arranged one each side of the path of the conveyor; a plurality of spaced parallel rigid supports secured between said drive means with the longitudinal axis of said
5 supports perpendicular to the path of the conveyor; a pair of guide tracks arranged between said drive means, said guide tracks being arranged to converge or diverge from a first predetermined spacing at one portion of said guide tracks to a second predetermined spacing at another predetermined portion of said guide tracks; each support having a pair of spaced retainer
10 blocks mounted thereon, with one block of each pair being engaged with one of said guide tracks and the other block of each pair being engaged with the other of said guide tracks; and a coil spring mounted around each support between each pair of retainer blocks and engaged with the retainer blocks such that the coil spring expands or contracts in length as the spacing between the retainer
15 blocks increases or decreases.
2. The conveyor as claimed in claim 1, wherein each said drive means includes a drive chain.
- 20 3. The conveyor as claimed in claim 1 or claim 2, wherein each retainer block is formed with a through hole through which the corresponding end of the associated support is arranged to pass.
4. The conveyor as claimed in any one of the preceding claims, wherein each
25 retainer block includes a guide roller arranged to engage the adjacent guide track.
5. The conveyor as claimed in any one of the preceding claims wherein each guide track provides a U-cross-section channel adapted to engage each
30 corresponding retainer block.
6. The conveyor as claimed in any one of claims 1-4; wherein each guide track is formed as a flat abutment face for a first part of its length, and for the remainder of its length provides a U-cross-section channel adapted to engage
35 each corresponding retainer block; said remainder of the length of each guide track comprising that portion of the length of said guide track over which the

guide tracks are further apart compared to said first part.

7. The conveyor as claimed in any one of claims 1–5, wherein each said coil spring is a tension spring.

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8. The conveyor as claimed in claim 7, wherein each said coil spring is engaged with the corresponding retainer block by means of a retainer bush engaged with a hole in said retainer block through which the end of the corresponding support passes.

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9. The conveyor as claimed in any one of claims 1–5, wherein each said coil spring is a compression spring.

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10. The conveyor as claimed in claim 9, wherein each said coil spring is engaged with the corresponding retainer block by means of a compression engagement between the end of said spring and said block.

11. The conveyor as claimed in any one of claims 1–6, wherein each said coil spring is a compression spring.

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12. The conveyor as claimed in claim 11, wherein each said coil spring is screw threadedly engaged with the corresponding retainer block.

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13. The conveyor as claimed in any one of the preceding claims, wherein each coil spring is stainless steel.

14. The conveyor as claimed in any one of claims 1–12, wherein each coil spring is plastics material.

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15. The conveyor as claimed in any one of the preceding claims, wherein said conveyor is secured together by a series of spaced tie rods which extend parallel to said supports and are arranged between the upper and lower runs of the conveyor.

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16. The conveyor as claimed in claim 15, wherein one or more of said tie rods is an air knife.

17. The conveyor as claimed in claim 15 or claim 16, wherein one or more of said tie rods is adapted to provide a water spray.
- 5 18. The conveyor as claimed in any one of the preceding claims, wherein said conveyor over its path provides a single convergence or divergence.
19. The conveyor as claimed in any one of claims 1–17, wherein said conveyor over its path provides two or more convergences and/or divergences.
- 10 20. One or more conveyors as claimed in any one of the preceding claims arranged so as to provide for the singulising of a product conveyed on the or each convey.